# The Causes of Fiscal Stalemate

Carl E. Klarner *
Department of Political Science
Indiana State University
cklarner@isugw.indstate.edu

Justin H. Phillips
Department of Political Science
Columbia University
jhp2121@columbia.edu

Matt Muckler
Town of Buckeye, AZ
mattmuckler@juno.com

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**Abstract**

Why do lawmakers in some states routinely pass late budgets, while their counterparts elsewhere rarely do? We argue that a late budget imposes a number of political and private costs on lawmakers, the magnitudes of which are shaped principally by institutions and features of the political environment. When the private and public costs of delay are high we expect the budget to be adopted on time, but when these costs are low the probability and length of delay should increase. We test our expectations using an original dataset of the timing of budget adoption for all states over a forty-six year period. As expected, we find that variables which shape the costs of delay—legislative session length, the reversion point in the absence of an on-time budget, and divided government—are key determinants of the probability of stalemate. The length of the stalemate, however, is best predicted by the complexity of the budget. Insights from our analysis can be applied to budgeting at the national level. In particular, they help explain variation in the frequency and length of late federal appropriations bills and suggest reasons why federal budgets experience more stalemate than those adopted by states.

# 1  Introduction

Governors and state legislators often fail at one of their most basic obligations—funding the state government in a timely manner. Lawmakers in all states are required, either by constitutional or statutory law, to enact a new budget prior to the start of each fiscal year or biennium. Many budgets, however, are adopted after the prescribed deadline. While late budgets are common, the frequency of fiscal delay varies widely across jurisdictions—some states consistently fail to meet deadlines; others almost always enact on-time budgets.

Fiscal delay is generally undesirable. The absence of a budget agreement at the start of a fiscal year triggers a partial shutdown of government in 23 states (Grooters and Eckl 1998), usually forcing the furlough of public employees, the closing of state parks and facilities, and the suspension of "non-essential services" (Pulsipher 2004). Even when a shutdown is not mandated, one may occur if lawmakers cannot agree upon or obtain short-term government financing or if the stalemate is lengthy. Continuing resolutions, which are routinely used to ensure the continuous operation of government during budgetary disputes at the national level (Patashnik 1999), are prohibited in all but a small number of states.[1]

In the absence of a shutdown, late budgets still impose meaningful and unnecessary costs. Fiscal stalemate can lead to temporary reductions in service provision and delay promised payments to government contractors, public employees, non-profit organizations, and localities. Moreover, when a state begins the fiscal year without a new budget it is often forced to finance government operations by issuing costly short-term bonds (Lin 2008). Balanced budget requirements mean that these costs are passed onto voters in the form of future tax increases or service cuts.

On occasion, fiscal stalemate even triggers state constitutional crises as chief executives or "activist" judges attempt to prevent a government shutdown through unilateral action. In budget battles during the 1970s, Governor George Wallace of Alabama inde-

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[1]Continuing resolutions typically fund government activities at or near the prior year's level until a new budget can be agreed upon.

pendently borrowed money from banks and issued executive orders keeping the government operating until an agreement with the legislature was reached (Associated Press 1997).[2] During a 2003 Nevada budget dispute, the state's supreme court averted a government shutdown by suspending the state's constitutional requirement of a two-thirds legislative majority for raising taxes (*Guinn v. Legislature*, 2003). In other instances, courts have ordered lawmakers to continue to fund activities the court deems essential, regardless of existing state law (see Lopez 2005; Yamamura and Ortiz 2008).

Not surprisingly, late budgets are unpopular with voters. In addition to their costs and inconveniences, they indicate a fundamental shortcoming of representative government. Late budgets are highly visible and objective examples of officials failing to comply with a basic obligation. Fiscal stalemate suggests that elected elites are not working together, possibly for political reasons, and that important services and the fiscal solidity of the state are being jeopardized. Opinion polls demonstrate that late state budgets cut deeply into the approval ratings of both branches of government (see Quinnipiac 2001; Field Poll 2004). The ability of their state to meet these deadlines is, thus, one standard by which voters evaluate the quality of government.

Given their unpopularity and potential costs, why are late budgets common? What institutional and strategic contexts produce stalemate? We argue that the probability of a late budget is largely a function of the costs that it will impose on lawmakers. When a budget is signed into law after the prescribed deadline, the governor and legislators pay *political costs* in that their public images are harmed, potentially making them vulnerable to future electoral challenges and undermining their ability to advance their preferred legislative agenda. Many lawmakers also face *private costs* in that fiscal stalemate forces them into what may be a time-consuming special legislative session, preventing them from pursuing their private careers and personal lives. The magnitude of these costs should vary across states and fiscal years as a function of institutions and political context. In particular,

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[2]Alabama courts later ruled that the governor had overstepped his constitutional authority.

political costs should be high during an election year, when state law requires a government shutdown in the absence of a new budget, and during periods of unified government. Private costs should be highest when lawmakers meet in short legislative sessions.

To test our expectations, we have compiled an original data set on the timing of budget adoption for all states over a forty-six year period—1961 to 2006. Data were collected using legislative journals and communication with state reference librarians. For each fiscal year, we not only identify all late budgets, but also the number of days each was adopted after the deadline. These data allow us to consider whether the factors that affect the probability of a late budget are the same as those that determine the length of the delay. For more recent years, we also include data on the content of gubernatorial budget proposals, allowing us to assess whether fiscal stalemate is driven by governors pushing for large policy change.

This paper is the first to document the extent and length of late state budgets as well as the first to systematically consider the forces that lead to fiscal delay. While local media and good government organizations have long speculated as to the causes of fiscal stalemate, their answers and proposed solutions tend to be based upon the experiences of a single state, are often inconsistent across jurisdictions, and have yet to be rigorously evaluated. Our data collection allows us to test several new hypotheses concerning the determinants of late budgets as well as many explanations that have been proposed by observers of state politics.

The results of our analysis have implications for the design of state government. By understanding the role that political and private considerations play in shaping the willingness of lawmakers to engage in budgetary stalemate (and the way in which institutions shape these considerations), we can develop better insight into whether there are institutional solutions to fiscal impasse. In particular, we can evaluate solutions that are commonly proposed by commentators and reformers, including docking the salary of lawmakers when the budget is late, moving the start date of the fiscal year, and changing legislative voting rules. We can also suggest solutions that may not yet be on the table. To the extent that late budgets undermine confidence in representative government and impose unnecessary fiscal

costs on voters, uncovering solutions to fiscal impasse is a worthwhile endeavor.

Our research also provides insights concerning federal budgeting. Frequent late budgets are not simply the product of idiosyncratic features of state policymaking or politics. Federal lawmakers also routinely miss budgetary deadlines. We use insights from our state-level analysis to explain why federal budgets are often late and to account for differences in the patterns of fiscal delay across levels of government. We also test a limited set of our hypotheses using data on the adoption of federal appropriations bills. Doing so allows us to consider the portability of our model and serves as a robustness check for many of the findings generated in our state-level analysis.

Broadly, this investigation adds to our understanding of legislative gridlock, a condition that is seemingly endemic to American politics. Prior scholarship has largely studied the determinants of gridlock by examining variation in legislative output across sessions of Congress (Mayhew 1991; Binder 1996, 2003; Chiou and Rothenberg 2003).[3] Existing work, while clearly generating important insights into policymaking, has been theoretically and empirically limited by the absence of institutional variation at the national-level. Furthermore, there remain substantial and unresolved debates regarding the importance of divided government and super-majoritarian voting rules as determinants of legislative performance. Using an alternative (fiscal) measure of gridlock we are able to re-evaluate many existing hypotheses. By conducting the bulk of our theoretical and empirical analysis in the context of the states, we are also able to consider the effects of fiscal and legislative institutions on gridlock in a way that the national literature cannot.

## 2    Theory and Hypotheses

One of the most important actions in any legislative session is the adoption of the budget. It is through the budgeting process that lawmakers decide the quantity and quality of public goods and services provided by the state, the distribution of those services, and the distribution

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[3]For studies of gridlock at the state level see Clarke (1998) and Bowling and Ferguson (2001).

of the burden for their finance. As such, these decisions tend to be contested, complex, and controversial. The difficulty of budgeting is compounded by state balanced budget rules that often force lawmakers to make difficult choices between cutting popular services or enacting unpopular tax increases.

Despite these difficulties, legislators and governors in all states are required to adopt a new budget prior to the start of each fiscal year or biennium. The players in state budget negotiations cannot avoid this task. Continuing resolutions, though widely used in federal budgeting (Patashnik 1999), are not important considerations in state budget negotiations. Only a small number of states permit some form of continuing resolutions (Grooters and Eckl, 1998), and even these are labeled "interim budgets" (New York) or "stop gap funding" (Pennsylvania). None can become permanent. This is different from the federal government where Congress and the President can avoid adopting a new budget and instead use continuing resolutions to fund government operations for an entire fiscal year (Meyer 1997; Davidson, Oleszek, and Lee 2007).[4]

Given the challenges inherent in budgeting, it is not at all surprising that lawmakers have problems meeting deadlines. Indeed, these challenges suggest that the baseline probability of delay is high. We argue, however, that this probability will shift up or down depending on the magnitude of the political and private costs of delay faced by lawmakers.

## 2.1 Political Costs

A late state budget—one that is signed into law after the start of the fiscal year or biennium—imposes political costs on lawmakers. In all states, a late budget generates unfavorable press, often highlighting legislative gridlock and partisan acrimony in the capitol as well as the very real monetary costs produced by delay. The effect on the approval of elected officials is well documented. Opinion polls, conducted during and after fiscal stalemate show that late budgets cut deeply into the public approval of both branches (Quinnipiac 2001, 2007; Field

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[4]For this reason, the reversion point in formal models of federal budgeting is often assumed to be the prior year's spending levels (c.f., Kiewiet and McCubbins 1988).

Poll 2003, 2004; Salisbury 2005).

There are two likely consequences of lower public approval. First, low approval ratings for incumbents should make them more vulnerable in upcoming elections. Research shows that public approval is a key determinant of the electoral success of incumbents (Erikson, MacKuen, and Stimson 2002; Mcdermott and Jones 2003). Voters also tell pollsters that fiscal stalemate makes them less willing to vote for incumbents, a claim that is supported by analyses of individual governors (c.f., Gerston and Christensen 2004).

Even if voters do not hold lawmakers accountable, interest groups that represent entities and individuals harmed by a late budget or government shutdown—business organizations, public labor unions, local government organizations, and non-profit service providers that work on behalf of the government—may do so independently. These groups are powerful actors in state politics, bringing important financial and personnel resources into the political process and offering key endorsements during elections. Of course, increased vulnerability does not guarantee electoral defeat. Reelection rates are high for states offices (Berry, Berkman, and Schneiderman 2000) and most officials win reelection even following a late budget. That being said, politicians usually work to avoid angering their constituents and key interest groups.

Second, low popularity may undermine the ability of officials to advance a legislative agenda. The literature commonly assumes that public approval facilitates policy success. This assumption is supported by research showing that a President's popularity is positively correlated with legislative influence (Canes-Wrone and de Marchi 2002) as well as evidence suggesting that popular governors are more successful at achieving their policy goals (Kousser and Phillips 2010). While there is no systematic evidence concerning the effect of approval on the ability of legislatures to move an agenda, observers note that the 1996 shutdown of the federal government reduced public support for the new Republican majority in Congress and nearly "stopped the Republican Revolution in its tracks" (Meyers 1997, 31).

While we believe that fiscal stalemate imposes political costs on governors and legis-

latures, these costs should not be constant across states or fiscal years. We argue that their magnitude will be shaped by the variables discussed below. When these costs are high, the governor and legislature face particularly strong incentives to agree upon an on-time budget.

**Automatic government shutdown.**   The reversion point, in the absence of a new budget, varies by jurisdiction. Typically, a delayed budget triggers (by law) at least a partial shutdown of the government, resulting in the closing of many state facilities and parks, the furlough of public employees, and the suspension of "non-essential" services (Grooters and Eckl, 1998; Pulsipher 2004).[5] In some states, however, the government is temporarily allowed to operate even if the legislature and governor fail to agree upon a new budget. Lawmakers in these states usually finance government operations via one of two approaches (depending upon what is legally permissible). The first of these is a continuing resolution, which funds government operations at or near the prior year's level until a new budget can be agreed upon. The second approach relies on some combination of reserve funds, IOUs, intergovernmental revenues, borrowing, and deferrals of expenditures. While these approaches are short-term (none can become permanent), they do allow most facilities and services to remain open until an agreement can be reached or until temporary funding options have been exhausted. Whether or not a late budget triggers an automatic government shutdown is almost always determined by state constitutional law and is not easily manipulated.[6]

The political costs of a late budget should be highest when a government shutdown is triggered. Shutdowns are the most visible form of fiscal impasse, impose the greatest inconvenience on voters, and impose great costs on those individuals and organizations that are financially dependent upon the state. During shutdowns, the media often fuels public

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[5]Essential services often (though not always) include prisons, highway patrol, welfare, and public health programs (Pulsipher 2004). Examples of recent state government shutdowns are Tennessee (2002), Minnesota (2005), New Jersey (2006), Michigan (2007) and Pennsylvania (2007)

[6]Categorizing states into jurisdictions that either do or do not mandate a government shutdown is admittedly a blunt instrument for measuring state reversion points. There remain additional more fine-grained variations across states. For instance, among those with a shutdown requirement there are small differences in which public services are deemed "non essential" and therefore subject to temporary closure. Identifying and operationalizing these differences is not practical. That being said, we do not expect such differences to be as meaningful as shifting from having to not having a shutdown requirement.

anger by focusing its coverage on sympathetic individuals or groups who are particularly harmed—students whose state university must temporarily close (Stambaugh 2002), single mothers who rely on government paychecks to provide for their children (Sweeney 2005), family vacations cut short by closed state parks (Associated Press, 2007), etc. Correspondingly, the political costs of a late budget should be lower if lawmakers can utilize continuing resolutions or other mechanisms to keep the government operating, though doing so does not fully insulate the governor or legislature.

**Election year.** Political costs should also be shaped by the proximity of the next election. A late budget during an off year, as opposed to an election year, provides lawmakers with a larger window of time in which to make amends with voters before they go to the polls. If the political memories of voters are short, they may be less likely to incorporate a prior fiscal stalemate into their vote choice as time pases. We thus expect to observe a significantly lower probability of a late budget during election years.

**Divided government.** A third factor that should shape the magnitude of the political costs is the partisan control of government. While public opinion polls show that fiscal stalemate hurts the approval of members of both branches, lawmakers may be somewhat insulated during divided government since members of the Democratic and Republican parties share responsibility for budgeting. A late budget may weaken the electoral prospects of incumbents from both parties, but (on average) is unlikely to provide a distinct advantage to one group of partisans. If the governorship and both legislative chambers are controlled by the same party, however, accountability should be clear and failure to adopt a timely budget can more easily be exploited by members of the out party. We therefore expect the probability of a late budget to be higher during periods of shared power.

Of course, divide government may also indicate a genuine divergence in the fiscal preferences of the governor and legislature, making it difficult to agree upon a new budget

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independent of political costs.[7] Research on legislative gridlock often argues that divided government increases conflict and lowers legislative output. While there is only mixed empirical support for this claim (Mayhew 1991; Binder 1996, 2003; Clarke 1998; Bowling and Ferguson 2001; Chiou and Rothenberg 2003), we are careful not to interpret a divided government effect as exclusively being driven by political costs. That being said, divided government at the state level is not necessarily indicative of large inter-branch differences in preferences (Erikson, Wright, and McIver 1993; McAtee, Yackee, and Lowery 2003).

While describing traditional lawmaking, Morris Fiorina writes that, "Divided control gives each branch of government an electoral incentive to work for the failure of the branch held by the other" (1996, 87). We are, however, skeptical that this same logic applies to budget negotiations in the states, at least if failure means missing the deadline. The failure to pass health care or welfare reform, unlike the failure to pass a budget, does not cause or risk a government shutdown. It is a dangerous gamble for any one side of negotiations to intentionally delay the budget and hope that the public holds the other player(s) more accountable. First, polling demonstrates that fiscal delay at the state level negatively impacts the public's opinion of both the legislative and executive branches, even during divided government. Second, even if voters were to chose one side, it is hard to anticipate *ex ante* whether majority opinion will support the governor or legislature. For instance, going into their 1996 budget dispute with President Clinton, many Republicans in Congress predicted that they would win the public relations battle, only to have a majority of voters eventually side with the President. The political fallout from the 1996 budget battle demonstrates the inherent risk involved in such a strategy (Meyers 1997).

## 2.2 Private Costs

A fiscal stalemate should also impose private costs on legislators in many states. Since a new budget is required each fiscal year or biennium, the legislature must stay in session until

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[7]Lawmakers with strong policy preferences may also be willing to pay political costs to block policies they oppose.

a final agreement with the governor can be reached. Remaining in the capitol to engage in protracted budget negations can be personally costly to those legislators who must return home for professional reasons. Where legislators face high private costs (in addition to the political costs associated with fiscal delay), we should observe a decreased probability of a late budget.

We argue that session length should be a key determinant of the private costs of delay. State legislatures vary widely with respect to their session lengths. Some resemble the U.S. House of Representatives in that there are few or no constitutional restrictions on the amount of time they are in session. These chambers meet for much of the year and service is nearly the equivalent of a full time job (Kurtz et al 2006). In such chambers, lawmakers traditionally plan for long stays in the capitol (regardless of the progress of budget negotiations) and continue to meet well after the start of the new fiscal year. As a result, protracted budget bargaining imposes few additional private costs on lawmakers since they have little to no expectation of a quick session.[8]

Many legislatures, however, face constitutional restrictions on the number of days that they are allowed meet, though special sessions may be called if necessary. Restrictions in "part-time" chambers often range anywhere from 20 to 140 calendar or legislative days. Surveys of lawmakers reveal that service in these chambers (time in session, constituent service, interim committee work, and election campaigning) is equivalent to 50% or less of a full time job (Kurtz et al 2006). Members of legislatures that meet in restricted sessions do not usually anticipate or plan for lengthy stays in the capitol. Indeed, they frequently maintain outside careers both because doing so is possible and because many of these chambers do not provide much in the way of financial compensation (Moncrief, Squire, and Jewell 2001; Maddox 2004). In constitutionally restricted legislatures, regular sessions often end long before the start of the fiscal year.

When a budget is late, lawmakers in part-time chambers are required to meet in what

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[8]State legislatures very rarely meet for less than their allotted amount of regular-session time.

may be a time-consuming special session, forcing them to stay in session longer than planned and often preventing them from returning to their private careers. The prospect of leaving their day jobs to resolve budget conflict is costly and should make members less willing to engage in fiscal stalemate. Indeed, the farther the regular session ends before the start of the fiscal year, the greater the private costs of a late budget ought to be. As Kousser and Phillips (2009) show, governors can exploit the relative impatience of legislatures that meet in short sessions to extract concessions during the budget process.

Unlike legislatures, the private costs of fiscal delay should always be low for governors. The governorship, in all states, is a full-time and well-paid job, meaning that governors can afford to engage in long and protracted battles over the budget.

## 2.3   Additional Explanations

The above factors are unlikely to fully account for variation in fiscal stalemate. Hypotheses as to the causes of late budgets have been offered in the media and by the good government groups that monitor state budgeting. While these explanations do not rely upon the political and private costs framework developed here, they are not incompatible with our expectations. Our empirical analysis will evaluate several of these hypotheses and contrast their effects to those variables that we believe shape the political and private costs of delay.

**Supermajority requirements.**   Observers often point to supermajority requirements as a reason for fiscal stalemate. Three states—California, Arkansas, and Rhode Island—require a two-thirds vote of the legislature to pass a budget. While proponents of these rules argue that supermajority requirements decrease the size of government (by empowering those who dislike a robust public sector), opponents claim that they simply make it more difficult to budget in a timely manner. Late budgets in California, which often receive national media attention due to the state's economic and social importance, are routinely blamed on the legislature's two-thirds rule (Cain and Mackenzie 2008; Wilkinson 2008). Indeed,

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numerous attempts have been made to lower California's super majority requirement, but none have been successful. Theoretical and empirical studies of Congress also argue that supermajority rules (the filibuster in the Senate) are a source of legislative gridlock and low legislative output (Krehbiel 1998; Binder 1999; Chiou and Rothenberg 2003).

**Fiscal conditions.** The fiscal health of the state is also thought to be a key determinant of late budgets. When a state is struggling to fund its budgetary obligations, lawmakers often must choose between cuts in popular government programs and unpopular tax increases. Such choices generate intense opposition from voters and interest groups, making budgeting significantly more controversial and difficult. During periods of prosperity, however, it should be easier to accommodate divergent fiscal preferences.

**Budget Complexity.** In some states the budget process may simply be more onerous than it is elsewhere, resulting in a higher propensity for delay. Lawmakers in states with a relatively sizable public sector are likely to have a significantly larger workload associated with the budgeting, both when it comes to drafting appropriations bills and engaging in program review and evaluation. The same may be true for states that budget biennially.

A third factor that may affect complexity is the start date of the fiscal year. While most state fiscal years begin on July 1st, they start notably earlier in New York and much later in Texas, Alabama, and Michigan.[9] Observers argue that a late start date allows lawmakers to have a more complete and accurate revenue forecast for the upcoming year, making the budget process easier on lawmakers. Accurate revenue forecasts are particularly important since all states except Vermont operate under balanced budget rules. The early start of the fiscal year in New York is sometimes blamed for the state's frequent late budgets (Baker 2004; Citizens Budget Commission 2004).

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[9]The starting month of the New York fiscal year was moved from July to April in 1943. The fiscal year begins on September 1st in Texas and on October 1st in Alabama and Michigan.

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# 3    Frequency of Late State Budgets

To test our hypotheses, we have collected systematic data on late state budgets for a 46-year period—1961 through 2006. Data collection proceeded in two steps. First, we established whether each state budgets annually or biennially using the *Book of the States* and additional state-specific sources. Then, to determine the date of adoption for each budget, we consulted legislative journals. If the journal ended prior to the start of the fiscal year or biennium, we were able to conclude with certainty that the budget had been enacted on time. If the journal did not end prior to the start of the fiscal year or biennium, we searched its text for the date of budget adoption. When necessary, legislative journals were supplemented by correspondence with reference librarians. Using this information we were not only able to identify whether the state had passed the budget late, but if so, by how many days.[10]

Ultimately, we successfully obtained data on all enacted budgets for 48 states, for a total of 1,756 state budgets. The exceptions are Alaska and Illinois, for which we only have reliable data on 5 and 15 budgets respectively. For Alaska, we were simply unable to gain access to the necessary legislative journals. Illinois, in most fiscal years, adopted over one hundred budget bills, making it all but impossible to effectively determine an adoption date.

Our data reveal that fiscal delay is common—over 15 percent of all state budgets are adopted late. Of budgets for which we have data, 3.8 percent were one week late, 7.1 percent were adopted between 8 and 31 days after the start of the fiscal year, and 4.5 percent were more than one month late. Figure 1, presents our data for each biennium, showing the share of late budgets across all states. This figure reveals that while there is a great deal of biennium-to-biennium fluctuation in the frequency of late budgets, there is no obvious trend toward increased fiscal stalemate. The decade with the fewest late budgets was the 1960s (with 11%); in each subsequent decade between 16% and 18% of all budgets passed late.

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[10]We identified a handful of instances in which a state's budget was split into multiple bills, some adopted before the start of the fiscal year, and others afterwards. In each of these cases, however, the vast majority of the budget was passed either before or after the deadline, allowing us to easily classify the overall budget as on time or late. We treat the date on which the bulk of the budget was passed as the date of adoption.

Table 1 shows, by state, the frequency and length of fiscal delay. Not surprisingly, there is a great deal of variation. A total of 20 states did not experience a single late budget during the 46 years included in our analysis. At the other extreme, 10 states saw over one-third of their budgets adopted after the start of the fiscal year. The "leaders" in this category are Wisconsin (83%), New York (72%), and Louisiana (70%). Just as the frequency of late budgets varies so does their length. While the average budget delay is 30 days, several have lasted well over three months. Average delays in those states with the most frequent late budgets (Wisconsin, New York, and Louisiana) range between 11 and 48 days.

# 4   Independent Variables

Each of the variables described below is used in our empirical analysis.

**Political costs.**   Three variables are employed to consider the effects of political costs on the probability of a late budget. *Government Shutdown*, identifies states where at least a partial government shutdown is mandated if a new budget is not agreed upon prior to the start of the fiscal year. *Election Year* is an indicator for years in which there is either a legislative or gubernatorial election. *Divided Government* identifies years in which the Democratic and Republican parties share control of government.

**Private Costs.**   Testing our expectation that private costs shape the probability of fiscal delay requires a variable that captures legislative session length. Measuring session length is complicated by issues of endogeneity. When the budget is late, the legislature in most states is forced to meet in an extended session until an agreement with the governor can be reached. While long sessions may increase the probability of a late budget (as we hypothesize), a late budget should also increase the number of days the legislature meets. To mitigate against this concern, we use a measure that captures the amount of time the legislature meets, but is

not influenced by whether the budget in any particular year is late.[11] This measure, *Session Days*, is the amount of time (measured in calendar days) between the start of a state's fiscal year and the last date the state constitution says the legislature can meet in regular session. If the session is not limited by the constitution, we assume the last day to be December 31st. When the regular session is required to end prior the start of the fiscal year, a state's score is negative. So for instance, a state would receive a score of -30 if its fiscal year begins July 1st, but its regular legislative session is required to end on June 1st. Scores on *Session Days*, range from -168 to 274, with a mean of 24 (and a standard deviation of 130). Larger values obviously indicate longer sessions and smaller private costs of budgetary delay.

**Control Variables.** To test whether supermajority requirements increase the probability of fiscal delay, we include a dummy variable for those states that require a two-thirds legislative vote for adoption of the budget (*Supermajority to Pass Budget*). Fiscal conditions are captured by *Surplus* which is a lagged measure of a state's budgetary surplus, operationalized as the difference between total expenditures and revenues (negative values indicate a budget deficit). We also include a measure of the annual change in per-capita income (*Change Income Per Capita*).

We use three variables to test whether the complexity of a state budget increases the probability of delay. The first is the size of the budget (*Budget Size*) measured as total expenditures in 2000 dollars. The second is (*Biennial Budget*) which identifies those states that budget biennially. During the period of time covered in our analysis numerous states switched from biennial to annual budgeting; a few switched in the opposite direction. The third, *Start of FY*, indicates the month in which the state fiscal year or biennium begins.

We rely upon a variety of sources for our political, institutional, and economic variables. Information regarding the partisan control of state government is from Klarner (2003) and updated using various issues of the *Book of the States*. Data on the size of budgets and

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[11]Even using a measure that averages session length over several years will be problematic for those states that regularly adopt a late budget.

budget deficits/surpluses come from the *Historical Database of State Government Finances* which is maintained by the U.S. Census of Governments. Data on personal income are from the U.S. Census Bureau, while information on election timing, budgetary voting rules, the use of annual or biennial budgeting, session length, and the starting month of fiscal years were culled from various issues of the *Book of the States* and supplemented with state specific sources and correspondence with state reference librarians. Finally, data on state reversion points in the absence of a new budget were obtained from Grooters and Eckl (1998) and updated where possible using state sources.

## 5 Results

First, we evaluate our cost model by documenting (with descriptive statistics) the basic relationships between several of our key variables and late budgets. We begin with those that should affect the political costs of delay—*Divided Government*, *Government Shutdown*, and *Election Year*. All three of these variables have the anticipated relationship with our dependent variable, indicating that low political costs increase the probability of fiscal delay. From 1961 through 2006, 20 percent of budgets adopted in states with divided government were late, compared to only 11 percent during periods of one-party control. Even more stark, in states without a shutdown requirement 25 percent of all budgets were late, while only 5 percent were late in jurisdictions with such a rule. Differences across states with unified and divided government and states with and without a shutdown requirement are statistically significant at the 99-percent level. Our data also reveal a small disparity between the frequency of delay during election and non-election years. This difference, while in the anticipated direction, is small (approximately 1 percentage point) and not meaningful.

We find similarly strong evidence with respect to private costs. A bivariate correlation between *Session Days* and our dependent variable shows a positive and meaningful relationship—as session length increases, so does the probability of delay. Indeed, only 4

percent of budgets are late when the legislature is required to meet in short sessions (those that end prior to the start of the fiscal year), while 33 percent of budgets are late in those with long sessions (those that end after the start of the fiscal year). The difference in the frequency of delay between states with short and long legislative sessions is significant at the 99-percent level.

When we consider our two institutional measures simultaneously we uncover a powerful additive effect. That is, if *both* political and personal costs are high it is particularly unlikely that the budget will be late. This is apparent if we categorize states as "high cost" (a shutdown requirement and short sessions), "mixed cost" (either a shutdown requirement or short sessions but not both), and "low cost" (no shutdown requirement and long sessions).[12] In high and mixed cost states the share of budgets that are late is 2.8 and 7.2 percent respectively. This number rises to a whopping 42.7 percent of all budgets in low cost states. Thus, using even relatively simple techniques, we find evidence that political and private costs are important determinants of an on-time budget.

## 5.1   Multivariate Models of Fiscal Stalemate

We now turn to our multivariate analysis, the results of which are reported in Table 2. The dependent variable in the first seven models is coded 1 if the state's budget was adopted late, and zero otherwise. Each estimation is a multilevel logistical regression that includes state and year random effects. These random effects treat budgets as being nested within states and years. We standardize all continuous predictors by centering (at zero) and dividing by two standard deviations. As a result, the coefficients for all continuous and binary predictors are comparable on roughly the same scale (Gelman 2008). A one-unit change in the continuous predictors covers two standard deviations of that predictor. Because these transformations are linear, they do not affect any inferences about statistical significance; rather, they simply make it easier to interpret the relative substantive magnitude of each

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[12]Observations are distributed fairly evenly across these three categories—32 percent in high cost states, 39 percent in mixed cost states, and 28 percent in low cost states.

predictor and to make comparisons about relative magnitudes across predictors.

We begin with models 1 through 4. The first model includes only those variables that capture political costs, the second our measure of private costs, and the third our "control variables"—i.e., those explanatory variables that do not fit neatly into our cost approach, but which may still affect the probability of delay. Model 4 uses all variables. Once again, the results largely confirm our expectations. First, the coefficients on two of our three measures of political costs—*Government Shutdown* and *Divided Government*—are correctly signed and significant at the 95-percent level. Only the coefficient on *Election Year* is not statistically significant, though the negative sign suggests the anticipated relationship. Second, the coefficient on our measure of private costs—*Session Days*—is also correctly signed and significant at the 95 percent level. Even after controlling for other predictors of delay, a late budget is much more likely in the presence of divided government, in states with longer legislative sessions, and in the absence of a shutdown requirement.

In models (not reported here), we employed alternative estimation strategies, including the use of clustered standard errors and year and state fixed effects.[13] We also used alternative operationalizations of our key independent variables.[14] None of these modeling changes alter our principal finding that political and private costs shape the probability of delay. Interestingly, if we replace *Divided Government* with dummies that capture different configurations of divided government (split branch vs. split legislature), we find some evidence that the probability of fiscal delay is greatest under the split branch configuration. This difference is not statistically significant, nor does the use of more than one measure of divided government improve model fit.

Several of our control variables are also consistent predictors of stalemate. The sig-

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[13]The use of state fixed effects, however, notably decreases our sample size by dropping states that did not experience a late budget. Moreover, since we do not observe within unit changes in *Government Shutdown*, state fixed effects do not allow us to estimate the impact of a mandated government shutdown.

[14]We replaced *Government Shutdown* with an indicator for states that allow continuing resolutions and *Election Year* with separate dummies for gubernatorial and legislative election years. We also evaluated several alternatives to *Session Days*, including dummies for long and short regular sessions, and a dummy for states with no restrictions on session length.

nificant coefficients on *Biennial Budget*, *Budget Size*, and *Start of FY* indicate that as the complexity of the budget increases so does the likelihood of delay. The negative and significant coefficient on our lagged measure of budget surplus suggests that a late budget is less likely when the fiscal circumstances of the state are strong. Perhaps most interestingly, in none of our models do we observe the anticipated positive and significant relationship between the existence of a supermajority voting rule and budgetary delay. This is a noteworthy result given the widely-held belief in California that the state's two-thirds rule is largely responsible for the state's often late budget.

In Model 5, we add a measure of legislature salary. As previously noted, not all lawmakers are well compensated for their service. In some states legislators are generously paid, while compensation in many others is quite low or nonexistent. Adding salary to our model allows for the possibility that financial compensation drives down the private costs of delay, increasing the likelihood of a late budget. Salary may have this effect by reducing the necessity of maintaining outside employment, at least in chambers where outside employment is possible—those that meet in short sessions. While existing research finds that a salary does not significantly alter the patience of legislators (Kousser and Phillips 2009), this remains a plausible hypothesis. Adding salary to our models also allows us to be sure that the session-length effect observed in models 1 trough 4 is not driven by the amount of financial compensation received by lawmakers. The correlation between session length and salary is fairly high (.46 in our data).

We operationalize salary as the total annual base salary paid to legislators as a share of state per capita income.[15] The average value on this measure is .94, ranging from zero (chambers with no salary) to 4.1 (California in 1967). When added to our model, the coefficient on legislative salary (though positive) does not reach statistical significance. Importantly, its

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[15]This figure does not include benefits or per diem. Data on benefits are very difficult to come by, particularly over a long period of time. While it would be ideal to have these data, prior research has shown that base salary is a fair approximation of overall compensation and correlates highly with more complete measurements (Squire 1988, 2007; Carey, Neimi, and Powell 2000). Our results remain unchanged if we use (inflation adjusted) salary instead of salary as a share of state per capita income. Data on salary come from the *Book of the States*.

inclusion does not meaningfully affect either the size or significance of the coefficients on any of the substantive variables, including *Session Days*. In estimations not reported here, we find that there is also no interaction effect between salary and session length. Furthermore, the inclusion of salary actually slightly decreases model fit.

In our combined models (4 and 5), the variables with the largest substantive impact are the institutional determinants of the political and private costs of delay—*Government Shutdown* and *Session Days*. The magnitude of their coefficients are consistently twice as large as those of other significant predictors, including divided government, budget size, and our lagged measure of budget surplus. Of these key institutional measures, *Session Days* has the best predictive power. Estimations that include only *Session Days* outperform those that include all three of our measures of political costs (Model 1) and perform nearly as well as estimations that include all our control variables (Model 3).

To further flesh out the substantive importance of key variables, we calculate and graph predicted probabilities of a late budget under a variety of conditions. In each graph, the x-axis is *Session Days* and the y-axis is the predicted probability of a late budget. Unless otherwise noted, all continuous variables have been set to their means and dichotomous variables have been set to zero. The predicted probabilities in Panels A, B, and C are generated using the results of Model 4.

Panels A and B demonstrate the importance of session length and shutdown requirements. In the presence of short regular sessions and a shutdown requirement, the probability of a late budget is very small (less than one percent), regardless of the partisan control of government. When sessions are longer (one standard deviation above the mean) and there is no shutdown requirement, the probability of a late budget rises to 11 percent under unified government and to 18 percent under divided government. At even longer session lengths— one and a half standard deviations above the mean—the probability of a late budget rises to 16 and 25 percent respectively. Panels A and B also reveal that shutdown rules and divided government have the largest substantive effect on the probability of a late budget when leg-

islative sessions are long—moving from unified to divided government or a shutdown rule to no such rule has little meaning when the regular session ends far before the start of the fiscal year, but has a great deal of meaning when sessions are long. Finally, as Panel C shows, the effects of a variable such as the fiscal health of the state (while statistically significant) are small when compared to state legislative and budgetary institutions.

While models 1 through 5 provide strong evidence that political and private costs are key drivers of budgetary stalemate, they lack a measure that captures the content of the budget over which lawmakers are bargaining. It is reasonable to anticipate that late budgets will be driven, at least in part, by policy disputes. This could be problematic for our analysis if controversial proposals are correlated with those institutional, fiscal, or political variables that we believe shape probability of delay. Unfortunately, it is impossible to obtain detailed data concerning the content of budgets over the full set of years included in our analysis.

For a subset of years (1988 through 2006), however, we have data on executive budgets, particularly any tax changes proposed by the governor. These data were culled from the *Fiscal Survey of States*, a publication of the National Association of State Budget Officers (NASBO). Each spring, NASBO publishes a list of all the tax increases and tax cuts in the budget that the governor submits to the legislature, as well as their net fiscal impact. We total these by state-budget year, adjust them to constant dollars, and divide by the state population. This gives us a new measure of budget content—the per-capita tax changes proposed by the governor. While fiscal controversy is certainly not limited to tax increases, we believe this measure to be a useful proxy. The mean on our new measure is $14 with a standard deviation of $94. In 32 percent of state-budget years this value is greater than zero meaning the governor proposed a net increases in taxes, while in 29 percent of state-budget years it is less than zero meaning the governor has proposed a net decrease.

All else equal, we anticipate that inter-branch conflict (and thus a late budget) will be most likely when the governor is asking the legislature for tax increases. This is confirmed by our results in models 6 and 7. The coefficients on *Governor's Proposed Tax Changes*

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are large, positive, and statistically significant.[16]  The inclusion of this measure has little effect on the explanatory power of other variables. Relative to models 1 trough 5, the size of the coefficients on *Government Shutdown*, *Divided Government*, and *Session Days* increase, while the size of the coefficients on *Budget Size* and *Start of FY* notably decrease, falling out of significance.  Estimations not reported here show that these changes occur due to differences in our sample and are unrelated to the inclusion of *Governor's Proposed Tax Changes*.

Panel D of Figure 2 shows the substantive magnitude of *Governor's Proposed Tax Changes*, plotting the probability of a late budget, conditioned upon the size of a governor's proposed tax changes. The top line represents a large tax increase (of $100 per capita), the middle line represents no proposed tax change, and the bottom line represents a large tax cut (of $100 per capita). Under fairly "unfavorable" circumstances (divided government, no shutdown requirement, and session length that is one standard deviation above the mean) there is an 18 percent chance of a late budget if the governor proposes a large tax cut, a 23 percent chance of delay if no changes are proposed, and a 29 percent chance of delay if she proposes a large increase.

## 5.2   Multivariate Models of the Length of Delay

Next, we consider the number of days that a budget is late, allowing us to test whether the same variables that shape the probability of delay also shape the length of delay (we anticipate that they will). Here the dependent variable of interest is a count of the number of days the budget was enacted after the start of the fiscal year, with on-time budgets scored as zero. Estimating the determinants of the length of delay, however, is complicated. First, since 85 percent of state budgets are enacted on time, our distribution is plagued with an "excess" of zeroes—it is overdispersed. Researchers typically address this problem by

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[16] *Governor's Proposed Tax Changes* is not acting as proxy for the partisanship of the governor. If we include a dummy for Democratic governors in either model 6 or 7 it is not significant and the coefficient on *Governor's Proposed Tax Changes* remains positive and significant at the 95-percent level.

using a negative binomial model. However, the extent of overdispersion violates even the assumptions of the negative binomial distribution (the overdispersion parameter for our data is 27.9). Second, since the process which generates zeroes in our data may be different the process that generates counts, we need to estimate models that allow for this possibility.

To deal with both concerns, we estimate a negative-binomial hurdle model (Mullahy 1986; Cameron and Trivedi 1998; Hilbe 2007). The basic idea of a hurdle model is that non-zero counts are only generated after some "hurdle" is crossed. These models are partitioned into two parts. The first is a binary process generating either zeroes or positive counts (governed by a binomial probability model), and the second is a process generating only positive counts (governed by a truncated-at-zero count model). These process are not constrained to be the same—explanatory variables are allowed to have a different impact in each model. In the hurdle models we present, the binary process relates to the generation of on-time versus late budgets (and is estimated using logit) while the count process pertains to the number of days a budget is late (and is estimated using a negative binomial model).[17]

Our hurdle models are reported in columns 8 and 9 of Table 2. Each provides separate parameter estimates for the determinants of late budgets and the determinants of the length of delay. These models include the same explanatory variables as columns 4 and 6, and use standard errors clustered by state (to the best of our knowledge one cannot yet estimate multi-level hurdle models). The results pertaining to late budgets (the top panel) are very similar to those previously reported. However, as the bottom panel of Table 2 shows, session length and shutdown rules are not particularly strong or robust predictors of the length of delay. The coefficient on *Session Days*, while still positive, does not reach statistical significance. *Government Shutdown* is also insignificant and even incorrectly signed in Model 8. Of our measures of political and private costs, *Divided Government* performs best, reaching significance in Model 8, but falling just short of doing so in Model 9.

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[17]Alternatively, we could employ zero-inflated count models. These are also two-part models with both binary and count components. Unlike hurdle models, however, zeroes are modeled using both binary and count processes. This alternative would not change any of our substantive findings. We opt to use and report hurdle models because they are easier to interpret and make more intuitive sense (Hilbe 2007).

Which variables are strong predictors of the length of delay? In both models 8 and 9, the coefficients on biennial budgeting and budget size are significantly and positively related to the number of days the budget is late, with biennial budgeting having the largest substantive effect. Additionally, the lagged measure of budget surplus is negative and statistically significant, indicating that states with a budget surplus are less likely to experience lengthy delay than are states with a deficit. Perhaps most surprising is the negative and significant coefficient on *Supermajority to Pass Budget* in Model 8. This indicates that the presence of a supermajority rule leads to shorter delays. We are not sure what to make of this result, but urge some caution given that only three states in our sample have supermajority requirements and of these only two ever experience a late budget.

Overall, our hurdle models indicate that those variables which are most robust and have the largest substantive effects in models of late budgets—a shutdown requirement, divided government, and session length—are fairly weak predictors of the length of delay. Instead the number of days a budget is late appears to be driven largely by the complexity of the budget and the fiscal circumstances of the state.

## 5.3   A Comment on Causality

It is conceivable that the causal arrow between state political institutions and late budgets flows in the opposite direction than we hypothesize. In this context, perhaps states that have a tendency to experience late budgets adopt institutions that minimize the political and private costs of fiscal delay. For instance, lawmakers could repeal rules requiring a government shutdown, postpone the start date of the fiscal year, or increase session length (and salary). These actions would create a strong correlation between the frequency and length of late budgets and those institutions we study, but not quite the relationship we believe that we have uncovered.

We recognize that it is often difficult to assess the direction of causality in observational studies and offer several responses. First, the institutions that we find to be predictors

of budgetary stalemate are not easily manipulated. Whether or not state agencies are required to shutdown in the absence of a new budget is typically established in the state constitution. Courts sometimes order the state to fund certain "essential" activities, but their rulings do not eliminate existing shutdown requirements. Similarly, our measure of session length is based upon constitutional rules regarding regular sessions. Change at the constitutional level is difficult and almost always requires the approval of the electorate. Attempts at institutional change are likely to be met with skepticism from voters, particularly if change is viewed as a means of facilitating fiscal delay, which itself is quite unpopular. Additionally, while the starting dates of fiscal years are typically set by statutory as opposed to constitutional law, substantially altering them is very disruptive. For instance, local governments rely heavily on state revenues and, thus, have designed their fiscal years around those of their state. Altering the state fiscal year not only requires restructuring a great deal of state financial transactions, but has the same implication for lower levels of government.

Indeed, we find little evidence that state budgetary institutions change much, at least over the years included in our analysis. Only Michigan altered the starting month of its fiscal year and (to the best of our knowledge) only New Mexico significantly changed its policies regarding government shutdowns. Of our institutional variables, the lone measure that changed with some frequency is session length. During the period of time included in our analysis, the number of states with unlimited regular legislative sessions grew from 14 to 19 and the mean value of our variable *Session Days* increased from 7 to 37.[18] Though we do not report the results here, we tested whether session length or salary were likely to increase in following a late budget—something we would expect to observe if lawmakers respond to late budgets by manipulating institutions to minimize future private costs of delay. To do so, we directly modeled increases in session length and salary as a function of late budgets in the prior one, two, or three fiscal years. We found only very weak relationships which were not consistently positive or negative and never statistically significant.

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[18]Salaries also rose by nearly 60 percent, but salaries as a share of per-capita income declined slightly.

Importantly, changes in the frequency and length of late state budgets tend to *follow* rather than proceed increases in session length. California is an instructive case. In the early 1960s, the state constitution restricted the length of time the legislature could meet to 120 days in odd-numbered years and only 30 days in even-numbered years. Most lawmakers maintained outside careers, include the Speaker of the Assembly, Jesse Unruh, who, in the 1950s, supplemented his legislative salary by counting boxcars for a Los Angeles railroad (Squire 1992). In 1966, however, voters passed Proposition 1A which "professionalized" the state legislature, giving it the ability to set its own salary and, importantly, removed all limits on the number of days it was allowed to meet. Our data show a dramatic increase in fiscal delay after the removal of these limitations. From 1960 through 1966, California did not have a single late budget. Since Proposition 1A went into effect, however, 60 percent of all California budgets have been late, by an average of 18 days. Overall, we have not uncovered evidence suggesting that state institutional choice (at least when it comes to the institutions considered here) is systematically driven by prior patterns of fiscal delay or some underlying tendency to produce late budgets.[19]

# 6    Federal Budgeting

Can the insights generated from our analysis of state budgeting be applied to the national level? We believe the answer to this question is an unequivocal "yes." Our theoretical approach suggests that federal budgets should frequently be late, even more often than those at the state level. The political costs of a late federal budget are quite low. As previously noted, federal agencies are not required to shutdown if Congress and the President fail to agree to a new budget by the start of the fiscal year. Congress is also not under any legal obligation to adopt a new budget each year. If Congresses chooses, they can fund the

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[19]In a handful of states with frequent late budgets we do observe attempts at institutional reform that are aimed at reducing stalemate. In New York, reformers have prosed moving the start of the state's fiscal year from April to October while reformers in California have frequently proposed eliminating the rule requiring a supermajority vote of the legislature to pass the budget. Currently, these efforts have been unsuccessful.

government for an entire fiscal year using a series of continuing resolutions. Recall, states must adopt a new budget each year or biennium and while a few are allowed to rely on continuous resolutions, these are only temporary solutions and none can become permanent. Correspondingly, the private costs of a late federal budget are also quite low. Service in Congress is a full-time job and well-paid, meaning that lawmakers do not maintain outside employment nor do they anticipate short legislative sessions.

This of course does not mean that late budgets at the federal level are uncostly (in an absolute sense) for lawmakers. They still generate negative press coverage and are fodder for claims of a "do-nothing" Congress. Budgetary delay also risks a government shutdown if conflict prevents Congress and the President from agreeing upon a continuing resolution, as happened in 1995-96 when the government shutdown twice. Late federal budgets are also costly for the government and thus voters—merely anticipating a shutdown wastes a great deal of time and money within the federal bureaucracy.

Despite the undesirability of a late budget, the relatively low political and private costs faced by Congress and the President suggest that we should observe frequent and lengthy fiscal delay. Indeed, this is what we see. From 1961 through 2006, 81 percent of federal appropriations bills were late.[20] This figure is several times higher than the state average of 15 percent. In fact, over the past four and a half decades, Congress has succeeded only four times in passing all of the required appropriation bills by the start of the fiscal year. The average length of delay at the federal level, which is shown in Figure 3, is also much longer than state delays. The average late budget among states is 30 days, while the average late federal appropriations bill misses the start of the fiscal year by 73 days. These patterns provide additional confirmation of the intuition of our theoretical model. Even when compared to states with low political and private costs, the federal government has a much worse record of on-time budgeting. In addition to the institutional differences, more

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[20]Data on federal appropriations bills were obtained from *Appropriations, Budget Estimates, Etc.* which is published annually by the Senate Committee on Appropriations. This document records the date of adoption and the dollar amount of each appropriation bill. In the event that one or more continuing resolutions were adopted in lieu of a new appropriations bill, we use the adoption date of the final continuing resolution.

frequent delay at the federal level may be due to the relative complexity (i.e., size) of the national budget.

This intuition is further confirmed by models of the determinants of federal fiscal stalemate. These models are parallel to those estimated at the state level and cover the years 1961 through 2005. There are, however, a few notable and necessary differences. The unit of analysis is now individual appropriations bills, 11 to 13 of which are adopted each year.[21] Second, we exclude *Government Shutdown* since it does not vary. This leaves us with two measures of the political costs of delay—*Divided Government* and *Election Year*. We also drop *Session Days* since the length of regular sessions in Congress remains constant across our time-series. This leaves us with no time-varying measure of the private costs of delay, which is not particularly problematic since these costs should be quite low and unchanging. Third, we replace *Start of FY* with a dummy variable, *After CBA* that is coded one in years after implementation of the Congressional Budget Act of 1974. The CBA increased the amount of time Congress and the President have to agree upon a new budget by moving the start of the federal fiscal year from July 1st to October 1st. Fourth, our measure of government size is now the total constant dollar value of the relevant appropriations bill. Finally, models 10 through 13 include random effects by President and by appropriations bill subject matter (e.g., defense, labor, etc), while model 14 reports standard errors clustered by presidential administration.[22]

Results of these estimations are reported in Table 3. In our full models, the variable with the largest substantive effect is *After CBA*. After moving the start date of the fiscal

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[21]Congress traditionally considers and approves each appropriations bill separately, but occasionally, two or more appropriations bills are rolled into a single omnibus bill (Streeter 2008).

[22]Binder (2003) conducts a similar analysis of federal budgeting. She considers the effect of divided government on the timeliness of the annual budget resolution, which the CBA requires Congress to adopt by April 15th of each year. The budget resolution represents the Congressional response to the President's budget proposal. We instead opt evaluate individual appropriations bills. First, the budget resolution is never sent to the president (so it does not require inter-branch agreement). Second, there are no real costs associated with a late budget resolution—indeed, in fiscal years 1999, 2003, 2005, and 2007 Congress failed to adopt one (Streeter 2008). Third, since budget resolutions were not required until fiscal year 1977, such an analysis would limit the amount of time included in our models and prevent us from measuring the effect of the CBA.

year from July to August the federal government experienced significantly less frequent and shorter fiscal delay. Indeed, this relationship is evident using relatively simply summary statistics and plots. Prior to implementation of the CBA, 96 percent of all appropriations bills were late, by an average of 101 days. Afterwards, the share of late appropriations bills dropped to 73 percent and the average length of delay to 54 days. This decline can be clearly seen in Figure 3.

Our estimations also uncover some evidence that political costs matter. In models 10 and 13 the probability of a late budget is meaningfully lower during election years and meaningfully higher during periods of divided government. These results weaken somewhat in alternative specifications. In both panels of the hurdle model, the coefficients on divided government remain correctly signed, but fall just shy of statistical significance, though they are significant with one-tailed tests. *Election Year* is also no longer a meaningful predictor of delay, but (conditioned upon the budget being late) it is a significant predictor of the length of delay. These results suggest that federal lawmakers, like their state-level counterparts, recognize a political cost to a late budget. Importantly, while political costs at the state level are principally shaped by shutdown rules, at the federal level they appear to be most meaningfully shaped by the timing of elections.

As in our state-level models, we again find that complexity is a key determinant of stalemate. As the size of an appropriations bill increases, so does the probability that it will be adopted after the start of the fiscal year. Larger bills also tend to experience lengthier periods of delay. After controlling for bill size, we do not observe any subject matter effects. There are however, statistically meaningful differences across presidential administrations. For instance, both Bush administrations and the Carter administration were particularly prone to delay while the Clinton and Johnson administrations were not. The significance of these administration random effects potentially point to differences in the political climate or differences in the bargaining skills and reputations of various presidents. Most notable may be the significant and negative random effect for President Clinton, despite the government

shutdowns in late 1995 and early 1996. This result supports anecdotal evidence suggesting that after the shutdowns Republicans lawmakers were reluctant to engage in protracted budget negotiations with President Clinton.

# 7 Conclusion

Why do some jurisdictions experience more fiscal stalemate than others? We conclude that much of the observed variation in the frequency of late budgets can be explained by the political and private costs faced by elected officials. When the costs of delay are low, the probability of stalemate increases, often in dramatic fashion. Differences in these costs explain budgetary outcomes at both the state and national levels.

Among states, the political costs of stalemate are lower in the absence of a shutdown requirement and during periods of divided government, while private costs are lower in states with lengthy legislative sessions. Of all of the variables included in our state-level models, session length consistently has the largest substantive effect—regular sessions that extend beyond the start of the fiscal year facilitate "budgetary foot dragging," enabling lawmakers to postpone difficult and complicated budgetary decisions. Our results indicate that political and private costs are more meaningful and robust determinants of the frequency of late budgets than are more common explanations, such as the existence of supermajority voting rules, the health of the economy, and the fiscal health of the state government.

Political and private costs also help explain why Congress and the President miss fiscal deadlines with even greater frequency than their state-level counterparts. The costs of fiscal stalemate are relatively low at the national level—there is no shutdown requirement in the absence of a new budget and Congress meets in lengthy, year-long sessions. Correspondingly, federal appropriations bills are late with over five times the frequency of state budgets and, when late, tend to miss the start of the fiscal year by over twice as many days. Furthermore, annual variation in the political costs of delay explain (in part) variation in the number of

late federal appropriations bills. The probability of delay is higher in nonelection years and during divided government.

While our results demonstrate that the political and private costs of delay are central to a model of fiscal stalemate, there are limitations to their explanatory power. After controlling for these costs, there remain other important predictors. Biennial budgeting, early fiscal years, and larger budgets are all positively correlated with the frequency of delay, suggesting that jurisdictions with a more complex budgeting process are more likely to have late budgets. Indeed, at the federal level, the best predictor of annual variation in the number of late appropriations bills is the starting month of the fiscal year starting month of the fiscal year, while political and private costs are poor predictors. Our empirical analyses produce some evidence that low costs lead to longer delays, but this evidence is not robust across model specifications. Instead, we find that the strongest predictors are budget or bill size, biennial budgeting, early fiscal years, and large deficits in the prior fiscal year.

Collectively, our results suggest that there are clear institutional fixes that could be used to reduce the frequency of late budgets. Indeed, in most of the models we estimate, the variables with the largest substantive impact are institutional. Lawmakers and reformers interested in reducing the incidence of budgetary delay could adopt laws requiring a government shutdown when the budget is late, shorten the amount of time that the legislature is in session, move the start of the fiscal year to later in the calendar year, and switch to annual budgeting. Individually, any of these changes would (to varying degrees) lower the probability of a late budget; collectively, they would have a dramatic effect. Though we do not find significant evidence that legislative salary affects the frequency of stalemate, the fact that we observe a general relationship between the private costs of delay and late budgets suggests that an additional approach may be to permanently deduct a large portion of legislators' pay and benefits in sessions when the budget is not adopted on time. This strategy may be particularly effective in jurisdictions where lawmakers are well compensated for their service.

These institutional changes, however, are not without potential costs. Requiring a full or partial government shutdown in the absence of an on-time budget subjects voters to the risk of burdensome disruptions in public services. Furthermore, long legislative sessions have been shown to increase the responsiveness of government policy to voter preferences (Maestas 2000; Lax and Phillips 2010) and biennial budgeting is thought to facilitate long-term fiscal planning. Retaining status quo institutions may be worth occasional or even frequent budgetary delay. Lawmakers and reformers will ultimately have to evaluate any institutional change in a context that does not exclusively focus on avoiding late budgets.

Our results also speak to ongoing debates within the gridlock literature, particularly debates about the consequences of divided government. Using an alternative measure of gridlock, we find new evidence that divided government does indeed increase stalemate. These results are consistent with much of the existing empirical research that considers more traditional measures of legislative output, such as the total number of failed legislative issues or the number of bills passed (Binder 1996, 2003; Bowling and Ferguson 2001). However, our results show that the substantive importance of divided government—at both the national and state levels—pales in comparison to the importance of various political and fiscal institutions. Not only do these results demonstrate the value of studying gridlock at the subnational level where institutional variation is more common, but they also suggests that divided government may be overemphasized as a source of gridlock.

While our analysis addresses the origins of fiscal stalemate as well as possible solutions, important questions remain for future research. How do late budgets differ from those adopted on time? What sort of compromises do lawmakers agree to in order to end stalemate? Are late budgets more likely to include deficit-increasing tax cuts or expenditures? The answers to these and similar questions will further enhance our understanding of gridlock and its consequences.

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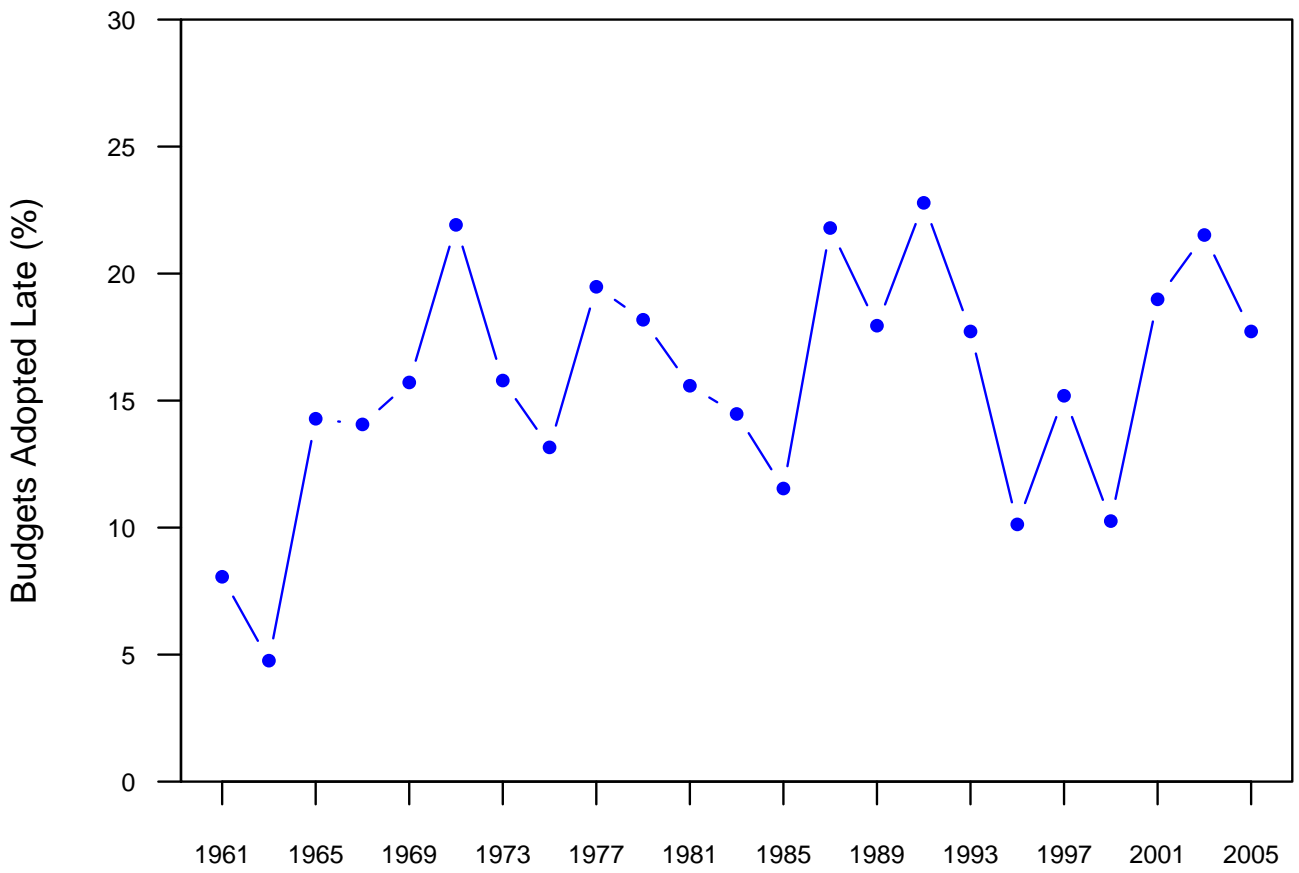
Figure 1: *Frequency of Late State Budgets: 1961-2006.* This graph depicts the share of budgets that are adopted late per biennium.
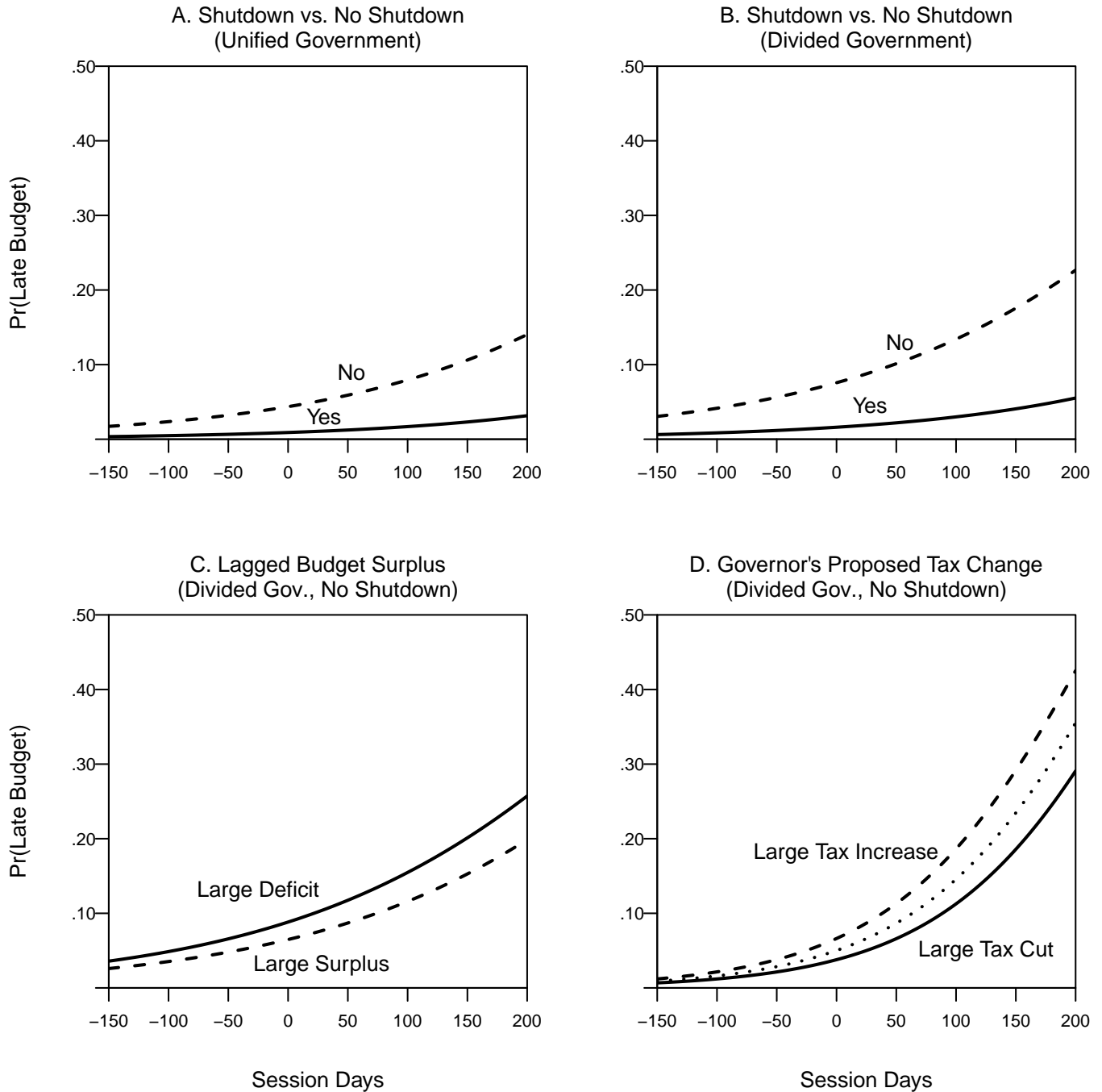
Figure 2: *Predicted Probability of a Late Budget.* Each graph plots the predicted probability of a late budget using Model 4 or Model 6 from Table 2. The x-axis is the number of calendar days between the start of a state's fiscal year and the last date the state constitution allows the legislature to meet in regular session. Negative values mean that the last session day takes place sometime prior to the start of the fiscal year. Larger values on the x-axis generally indicate longer sessions and lower private costs of delay. Unless otherwise noted, continuous variables have been set to their means and dichotomous variables have been set to zero.
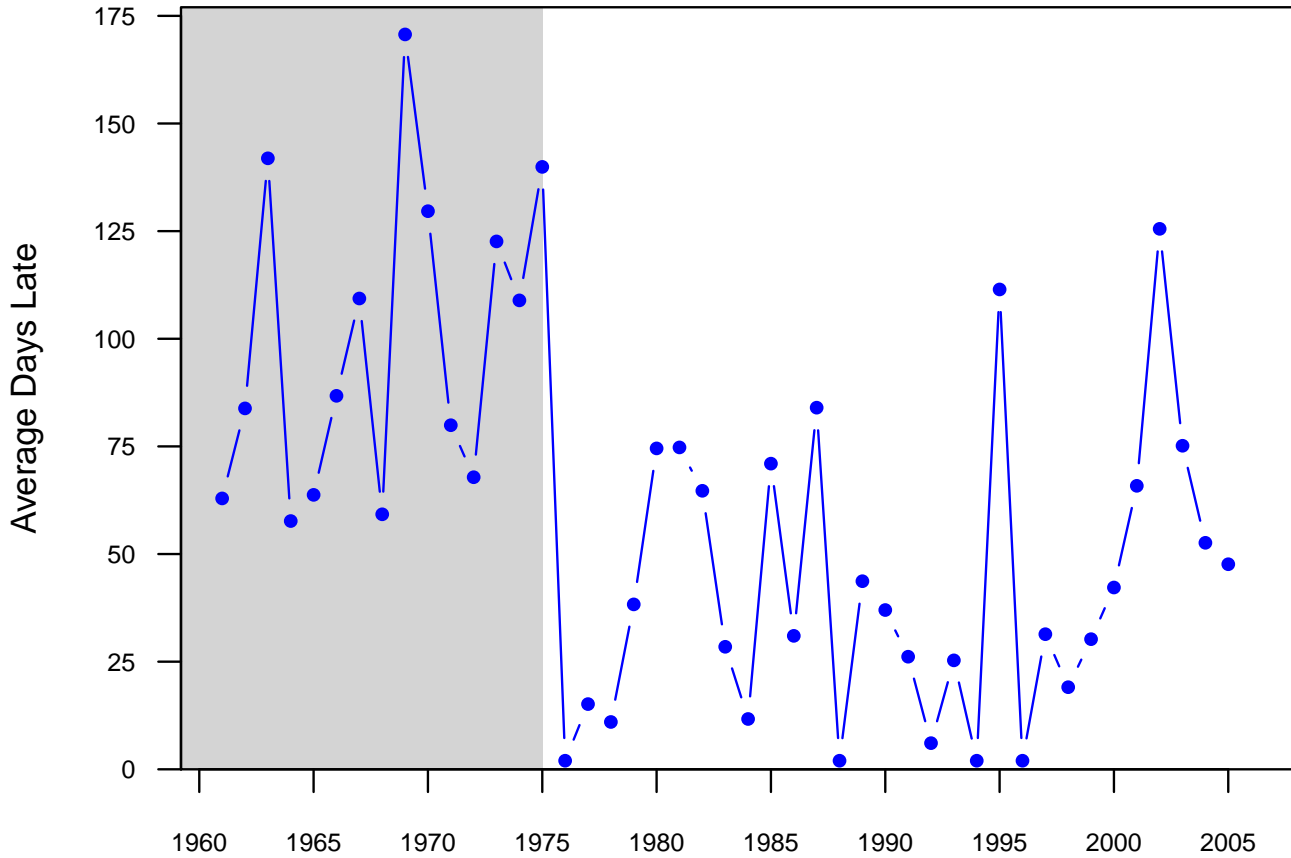
Figure 3: *Average Annual Delay in the Adoption of Federal Appropriations Bills: 1961-2006.*
This graph depicts (by year) the mean "lateness" of federal appropriation bills, measured
in calendar days. The gray region of the graph identifies the period of time in which the
federal fiscal year began on July 1st. The white region indicates a fiscal year start date of
October 1st. The start of the fiscal year was changed by the Congressional Budget Act of
1974. Source: U.S. Congress, Senate Committee on Appropriations, *Appropriations, Budget,
Estimates, Etc., 87th Cong., 1st sess. - 110th Cong., 2nd sess.*

| State | Late Budgets (%) | Average Days Late | Maximum Days Late |
|---|---|---|---|
| Alabama | 5.1 | 30 | 52 |
| Alaska | 0 | – | – |
| Arizona | 0 | – | – |
| Arkansas | 0 | – | – |
| California | 52.2 | 21 | 65 |
| Colorado | 0 | – | – |
| Connecticut | 5.9 | 49 | 52 |
| Delaware | 17.4 | 6 | 21 |
| Florida | 2.4 | 9 | 9 |
| Georgia | 0 | – | – |
| Hawaii | 0 | – | – |
| Idaho | 0 | – | – |
| Illinois | 40.0 | 23 | 52 |
| Indiana | 0 | – | – |
| Iowa | 13.5 | 14 | 20 |
| Kansas | 0 | – | – |
| Kentucky | 8.7 | 261 | 269 |
| Louisiana | 69.6 | 11 | 35 |
| Maine | 4.3 | 16 | 16 |
| Maryland | 0 | – | – |
| Massachusetts | 56.5 | 38 | 183 |
| Michigan | 34.8 | 37 | 187 |
| Minnesota | 4.3 | 13 | 13 |
| Mississippi | 7.3 | 56 | 73 |
| Missouri | 0 | – | – |
| Montana | 0 | – | – |
| Nebraska | 3.2 | 16 | 16 |
| Nevada | 0 | – | – |
| New Hampshire | 30.4 | 86 | 164 |
| New Jersey | 4.3 | 4 | 7 |
| New Mexico | 0 | – | – |
| New York | 71.7 | 41 | 132 |
| North Carolina | 50.0 | 33 | 121 |
| North Dakota | 0 | – | – |
| Ohio | 43.5 | 33 | 179 |
| Oklahoma | 14.3 | 21 | 31 |
| Oregon | 52.2 | 19 | 57 |
| Pennsylvania | 37.0 | 33 | 175 |
| Rhode Island | 17.0 | 18 | 37 |
| South Carolina | 13.0 | 24 | 41 |
| South Dakota | 0 | – | – |
| Tennessee | 2.4 | 3 | 3 |
| Texas | 4.3 | 12 | 12 |
| Utah | 0 | – | – |
| Vermont | 2.6 | 31 | 31 |
| Virginia | 0 | – | – |
| Washington | 0 | – | – |
| West Virginia | 2.2 | 14 | 14 |
| Wisconsin | 82.6 | 48 | 126 |
| Wyoming | 0 | – | – |

Table 1: *Frequency and Length of Late Budgets by State: 1961-2006.* The first column is the share of budgets that have been adopted late, the second is the average length of late budgets (measured in the number of days), and the final column is the length of the state's longest fiscal stalemate. The table includes data on all enacted budgets for 48 states from 1961 through 2006. For the states of Alaska and Illinois it only includes data for 5 and 15 budgets respectively.

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|---|
| **DV = Late Budget** | | | | | | | | | |
| Government Shutdown | -2.74** | | | -1.61** | -1.59** | -2.52** | -2.47** | -1.39** | -2.30** |
| | (.73) | | | (.61) | (.60) | (.90) | (.87) | (.55) | (.62) |
| Election Year | -.16 | | | -.11 | -.10 | .34 | .39 | -.25 | .05 |
| | (.19) | | | (.21) | (.21) | (.34) | (.34) | (.17) | (.34) |
| Divided Government | .63** | | | .58** | .58** | .90** | .87** | .49** | .95** |
| | (.18) | | | (.19) | (.19) | (.35) | (.35) | (.22) | (.34) |
| Session Days | | 2.34** | | 1.67** | 1.61** | 3.07** | 2.78** | 1.85** | 2.03** |
| | | (.40) | | (.42) | (.44) | (.84) | (.83) | (.52) | (.72) |
| Legislative Salary | | | | | .20 | | 1.21 | | |
| | | | | | (.33) | | (.90) | | |
| Supermajority to Pass Budget | | | .59 | -.12 | -.14 | .62 | .80 | -.70** | -.03 |
| | | | (1.51) | (1.15) | (1.13) | (1.41) | (1.34) | (.30) | (.39) |
| Change Income Per Capita | | | -.04 | -.02 | -.02 | -.13 | -.12 | -.02 | -.08 |
| | | | (.19) | (.19) | (.19) | (.27) | (.28) | (.20) | (.28) |
| Biennial Budget | | | .77* | .79* | .81** | 1.13 | 1.27* | .38 | .57 |
| | | | (.42) | (.40) | (.40) | (.78) | (.76) | (.44) | (.72) |
| Surplus (lagged) | | | -.32 | -.33* | -.33* | -.67** | -.68** | -.33* | -.34 |
| | | | (.20) | (.20) | (.20) | (.30) | (.30) | (.20) | (.32) |
| Budget Size | | | 1.16** | .88** | .90** | .28 | -.11 | .88** | .63** |
| | | | (.27) | (.26) | (.26) | (.46) | (.54) | (.15) | (.20) |
| Start of FY | | | -1.51** | -.80** | -.76** | .12 | -.08 | .19 | .08 |
| | | | (.36) | (.34) | (.34) | (.77) | (.76) | (.17) | (.46) |
| Governor's Proposed Tax Changes | | | | | | .56** | .56** | | .36* |
| | | | | | | (.27) | (.27) | | (.20) |
| Intercept | -2.29 | -3.09 | -3.55 | -2.93 | -2.93 | -3.51 | -3.41 | -1.92 | -2.45 |
| | (.45) | (.30) | (.43) | (.43) | (.42) | (.65) | (.63) | (.59) | (.84) |
| **DV = Days Late** | | | | | | | | | |
| Government Shutdown | | | | | | | | .24 | -.40 |
| | | | | | | | | (.26) | (.93) |
| Election Year | | | | | | | | .05 | -.10 |
| | | | | | | | | (.17) | (.23) |
| Divided Government | | | | | | | | .45** | .34 |
| | | | | | | | | (.16) | (.22) |
| Session Days | | | | | | | | .47 | .09 |
| | | | | | | | | (.36) | (.76) |
| Supermajority to Pass Budget | | | | | | | | -.74** | -.34 |
| | | | | | | | | (.29) | (.25) |
| Change Income Per Capita | | | | | | | | .05 | .18 |
| | | | | | | | | (.07) | (.16) |
| Biennial Budget | | | | | | | | .73** | .92** |
| | | | | | | | | (.29) | (.45) |
| Surplus (lagged) | | | | | | | | -.54** | -.39* |
| | | | | | | | | (.18) | (.20) |
| Budget Size | | | | | | | | .27** | .27** |
| | | | | | | | | (.11) | (.08) |
| Start of FY | | | | | | | | .02 | -.33* |
| | | | | | | | | (.16) | (.18) |
| Governor's Proposed Tax Changes | | | | | | | | | -.01 |
| | | | | | | | | | (.17) |
| Intercept | | | | | | | | 2.51 | 2.97 |
| | | | | | | | | (.24) | (.70) |
| Standard deviation of state effects | 2.08 | 1.70 | 2.33 | 1.61 | 1.57 | 1.76 | 1.66 | | |
| Standard deviation of year effects | .23 | .29 | .31 | .27 | .26 | 0 | 0 | | |
| N | 1719 | 1719 | 1719 | 1719 | 1719 | 742 | 742 | 1719 | 742 |
| AIC | 1012 | 1003 | 1000 | 977 | 979 | 378 | 379 | 2.03 | 2.13 |

Table 2: *Determinants of Late State Budgets.* Models 1 through 7 are logistic regressions and include random effects for state and year. Models 8 and 9 are hurdle models, which jointly estimate the determinants of a late budget (using a logit model) and the determinants of the number of days a budget is late (using a truncated-at-zero negative binomial model). In models 8 and 9 standard errors are clustered by state. All models are estimated using data from 1961-2006, except models 6, 7, and 9 which only use data from 1988-2006. Two-tailed tests are used: * < .10, ** < .05

| | (10) | (11) | (12) | (13) |
|---|---|---|---|---|
| **DV = Late Budget** | | | | |
| Election Year | -.75** | | -.46* | -.71 |
| | (.25) | | (.27) | (.76) |
| Divided Government | 1.20** | | 1.12** | .55 |
| | (.41) | | (.51) | (.40) |
| Change Income Per Capita | | -.47* | -.40 | -.19 |
| | | (.25) | (.28) | (.61) |
| Surplus (lagged) | | 1.09** | .65* | .29 |
| | | (.34) | (.37) | (.33) |
| Bill Size | | .49* | .49* | .48** |
| | | (.28) | (.29) | (.17) |
| After CBA | | -3.87** | -3.97** | -2.19** |
| | | (.88) | (.89) | (.62) |
| Intercept | 1.73 | .74 | .32 | 1.10 |
| | (.55) | (.61) | (.69) | (.44) |
| **DV = Days Late** | | | | |
| Election Year | | | | -.22* |
| | | | | (.13) |
| Divided Government | | | | .14 |
| | | | | (.10) |
| Change Income Per Capita | | | | -.30 |
| | | | | (.19) |
| Surplus (lagged) | | | | .19 |
| | | | | (.19) |
| Bill Size | | | | .17** |
| | | | | (.03) |
| After CBA | | | | -.61** |
| | | | | (.16) |
| Intercept | | | | 3.97 |
| | | | | (.14) |
| Standard deviation of President effects | 1.38 | 1.49 | 1.4 | |
| Standard deviation of subject matter effects | .21 | .16 | .17 | |
| N | 582 | 582 | 582 | 582 |
| AIC | 512 | 479 | 475 | 9.12 |

Table 3: *Determinants of Late Federal Appropriations Bills.* In models 10 through 13, the dependent variable is coded as 1 if the appropriation bill was late, zero otherwise. These estimations are logistic regressions and include random effects for President and appropriation subject matter. Model 14 is a hurdle model, which jointly estimates the determinants of a late budget (using a logit model) and the determinants of the number of days a budget is late (using a truncated-at-zero negative binomial model). This model utilizes standard errors clustered by Presidential administration. AIC = Akaike Information Criterion. Two-tailed tests are used: $* < .10$, $** < .05$